

SEQUENCE LISTING

<110> C. Frank Bennett
Nicholas M. Dean
Lex M. Cowsert

<120> ANTISENSE MODULATION OF INDUCIBLE NITRIC OXIDE SYNTHASE EXPRESSION

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<160> 182

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<212> DNA

<213> Artificial Sequence

<223> Antisense Oligonucleotide

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<210> 2

<211> 20

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<213> Artificial Sequence

<223> Antisense Oligonucleotide

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<210> 3

<211> 4145

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (207)...(3668)

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agccagctgc aagccccaca gtgaagaaca tctgagctca aatccagata agtgacataa 180

gtgacctgct ttgtaaagcc atagag atg gcc tgt cct tgg aaa ttt ctg ttc 233
Met Ala Cys Pro Trp Lys Phe Leu Phe
1 5

aag acc aaa ttc cac cag tat gca atg aat ggg gaa aaa gac atc aac 281
Lys Thr Lys Phe His Gln Tyr Ala Met Asn Gly Glu Lys Asp Ile Asn
10 15 20 25

aac aat gtg gag aaa gcc ccc tgt gcc acc tcc agt cca gtg aca cag 329

Asn	Asn	Val	Glu	Lys	Ala	Pro	Cys	Ala	Thr	Ser	Ser	Pro	Val	Thr	Gln	
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gat	gac	ctt	cag	tat	cac	aac	ctc	agc	aag	cag	cag	aat	gag	tcc	ccg	377
Asp	Asp	Leu	Gln	Tyr	His	Asn	Leu	Ser	Lys	Gln	Gln	Asn	Glu	Ser	Pro	
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cag	ccc	ctc	gtg	gag	acg	gga	aag	aag	tct	cca	gaa	tct	ctg	gtc	aag	425
Gln	Pro	Leu	Val	Glu	Thr	Gly	Lys	Lys	Ser	Pro	Glu	Ser	Leu	Val	Lys	
		60					65					70				
ctg	gat	gca	acc	cca	ttg	tcc	tcc	cca	cgg	cat	gtg	agg	atc	aaa	aac	473
Leu	Asp	Ala	Thr	Pro	Leu	Ser	Ser	Pro	Arg	His	Val	Arg	Ile	Lys	Asn	
	75					80					85					
tgg	ggc	agc	ggg	atg	act	ttc	caa	gac	aca	ctt	cac	cat	aag	gcc	aaa	521
Trp	Gly	Ser	Gly	Met	Thr	Phe	Gln	Asp	Thr	Leu	His	His	Lys	Ala	Lys	
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ggg	att	tta	act	tgc	agg	tcc	aaa	tct	tgc	ctg	ggg	tcc	att	atg	act	569
Gly	Ile	Leu	Thr	Cys	Arg	Ser	Lys	Ser	Cys	Leu	Gly	Ser	Ile	Met	Thr	
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ccc	aaa	agt	ttg	acc	aga	gga	ccc	agg	gac	aag	cct	acc	cct	cca	gat	617
Pro	Lys	Ser	Leu	Thr	Arg	Gly	Pro	Arg	Asp	Lys	Pro	Thr	Pro	Pro	Asp	
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gag	ctt	cta	cct	caa	gct	atc	gaa	ttt	gtc	aac	caa	tat	tac	ggc	tcc	665
Glu	Leu	Leu	Pro	Gln	Ala	Ile	Glu	Phe	Val	Asn	Gln	Tyr	Tyr	Gly	Ser	
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ttc	aaa	gag	gca	aaa	ata	gag	gaa	cat	ctg	gcc	agg	gtg	gaa	gcg	gta	713
Phe	Lys	Glu	Ala	Lys	Ile	Glu	Glu	His	Leu	Ala	Arg	Val	Glu	Ala	Val	
	155					160					165					
aca	aag	gag	ata	gaa	aca	aca	gga	acc	tac	caa	ctg	acg	gga	gat	gag	761
Thr	Lys	Glu	Ile	Glu	Thr	Thr	Gly	Thr	Tyr	Gln	Leu	Thr	Gly	Asp	Glu	
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ctc	atc	ttc	gcc	acc	aag	cag	gcc	tgg	cgc	aat	gcc	cca	cgc	tgc	att	809
Leu	Ile	Phe	Ala	Thr	Lys	Gln	Ala	Trp	Arg	Asn	Ala	Pro	Arg	Cys	Ile	
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ggg	agg	atc	cag	tgg	tcc	aac	ctg	cag	gtc	ttc	gat	gcc	cgc	agc	tgt	857
Gly	Arg	Ile	Gln	Trp	Ser	Asn	Leu	Gln	Val	Phe	Asp	Ala	Arg	Ser	Cys	
			205					210					215			
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Ser	Thr	Ala	Arg	Glu	Met	Phe	Glu	His	Ile	Cys	Arg	His	Val	Arg	Tyr	
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tcc	acc	aac	aat	ggc	aac	atc	agg	tcg	gcc	atc	acc	gtg	tte	ccc	cag	953
Ser	Thr	Asn	Asn	Gly	Asn	Ile	Arg	Ser	Ala	Ile	Thr	Val	Phe	Pro	Gln	
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cgg	agt	gat	ggc	aag	cac	gac	ttc	cgg	gtg	tgg	aat	gct	cag	ctc	atc	1001
Arg	Ser	Asp	Gly	Lys	His	Asp	Phe	Arg	Val	Trp	Asn	Ala	Gln	Leu	Ile	
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Pro Thr Ser Ser Arg Ala Thr Ile Leu Val Glu Leu Ser Cys Glu Asp	
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Gly Gln Gly Leu Asn Tyr Leu Pro Gly Glu His Leu Gly Val Cys Pro	
765 770 775	
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Gly Asn Gln Pro Ala Leu Val Gln Gly Ile Leu Glu Arg Val Val Asp	
780 785 790	
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Gly Pro Thr Pro His Gln Thr Val Arg Leu Glu Asp Leu Asp Glu Ser	
795 800 805	
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Gly Ser Tyr Trp Val Ser Asp Lys Arg Leu Pro Pro Cys Ser Leu Ser	
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cag gcc ctc acc tac tcc ccg gac atc acc aca ccc cca acc cag ctg	2729
Gln Ala Leu Thr Tyr Ser Pro Asp Ile Thr Thr Pro Pro Thr Gln Leu	
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ctg ctc caa aag ctg gcc cag gtg gcc aca gaa gag cct gag aga cag	2777
Leu Leu Gln Lys Leu Ala Gln Val Ala Thr Glu Glu Pro Glu Arg Gln	
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agg ctg gag gcc ctg tgc cag ccc tca gag tac agc aag tgg aag ttc	2825
Arg Leu Glu Ala Leu Cys Gln Pro Ser Glu Tyr Ser Lys Trp Lys Phe	
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acc aac agc ccc aca ttc ctg gag gtg cta gag gag ttc ccg tcc ctg	2873
Thr Asn Ser Pro Thr Phe Leu Glu Val Leu Glu Glu Phe Pro Ser Leu	
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cgg gtg tct gct ggc ttc ctg ctt tcc cag ctc ccc att ctg aag ccc	2921
Arg Val Ser Ala Gly Phe Leu Leu Ser Gln Leu Pro Ile Leu Lys Pro	
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Arg Phe Tyr Ser Ile Ser Ser Ser Arg Asp His Thr Pro Thr Glu Ile	
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cac ctg act gtg gcc gtg gtc acc tac cac acc gga gat ggc cag ggt	3017
His Leu Thr Val Ala Val Val Thr Tyr His Thr Gly Asp Gly Gln Gly	
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ccc ctg cac cac ggt gtc tgc agc aca tgg ctc aac agc ctg aag ccc	3065
Pro Leu His His Gly Val Cys Ser Thr Trp Leu Asn Ser Leu Lys Pro	
940 945 950	
caa gac cca gtg ccc tgc ttt gtg cgg aat gcc agc gcc ttc cac ctc	3113
Gln Asp Pro Val Pro Cys Phe Val Arg Asn Ala Ser Ala Phe His Leu	
955 960 965	
ccc gag gat ccc tcc cat cct tgc atc ctc atc ggg cct ggc aca ggc	3161
Pro Glu Asp Pro Ser His Pro Cys Ile Leu Ile Gly Pro Gly Thr Gly	
970 975 980 985	

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agc gag gtg ctc cgt gtg ctc cac aag gag cca ggc cac ctc tat gtt Ser Glu Val Leu Arg Val Leu His Lys Glu Pro Gly His Leu Tyr Val 1070 1075 1080	3449
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gct gta ttt cct tac gag gcg aag aag gac agg gtg gcg gtg cag ccc Ala Val Phe Pro Tyr Glu Ala Lys Lys Asp Arg Val Ala Val Gln Pro 1130 1135 1140 1145	3641
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gctatcgcac cactgtgtat ttaactgcct tgtgtacagt tatttatgcc totgtattta	4048
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<210> 5
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<223> PCR Primer

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19

<210> 6
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<223> PCR Probe

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<223> PCR Primer

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<223> PCR Primer

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<213> Artificial Sequence

<223> PCR Probe

<400> 9

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20

<210> 10

<211> 4145

<212> DNA

<213> Mus musculus

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agccagctgc aagccccaca gtgaagaaca tctgagctca aatccagata agtgacataa 180

gtgacctgct ttgtaaagcc atagag atg gcc tgt cct tgg aaa ttt ctg ttc 233

Met Ala Cys Pro Trp Lys Phe Leu Phe
1 5

aag acc aaa ttc cac cag tat gca atg aat ggg gaa aaa gac atc aac 281

Lys Thr Lys Phe His Gln Tyr Ala Met Asn Gly Glu Lys Asp Ile Asn
 10 15 20 25

aac aat gtg gag aaa gcc ccc tgt gcc acc tcc agt cca gtg aca cag 329

Asn	Asn	Val	Glu	Lys	Ala	Pro	Cys	Ala	Thr	Ser	Ser	Pro	Val	Thr	Gln
				30					35					40	

gat gac ctt caq tat cac aac ctc agc aag caq caq aat gag tcc ccg 377

Asp	Asp	Leu	Gln	Tyr	His	Asn	Leu	Ser	Lys	Gln	Gln	Asn	Glu	Ser	Pro
			45					50					55		

cag ccc ctc gtg gag acg gga aag aag tct cca gaa tct ctg gtc aag 425

Gln	Pro	Leu	Val	Glu	Thr	Gly	Lys	Lys	Ser	Pro	Glu	Ser	Leu	Val	Lys
		60					65					70			

ctg gat gca acc cca ttg tcc tcc cca cgg cat gtg agg atc aaa aac 473

Leu Asp Ala Thr Pro Leu Ser Ser Pro Arg His Val Arg Ile Lys Asn
75 80 85

tgg ggc agc ggg atg act ttc caa gac aca ctt cac cat aag gcc aaa 521

Trp	Gly	Ser	Gly	Met	Thr	Phe	Gln	Asp	Thr	Leu	His	His	Lys	Ala	Lys
90					95					100					105

ggg att tta act tgc agg tcc aaa tct tgc ctg ggg tcc att atg act 569

Gly Ile Leu Thr Cys Arg Ser Lys Ser Cys Leu Gly Ser Ile Met Thr
110 115 120

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Pro Lys Ser Leu Thr Arg Gly Pro Arg Asp Lys Pro Thr Pro Pro Asp

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Glu	Leu	Leu	Pro	Gln	Ala	Ile	Glu	Phe	Val	Asn	Gln	Tyr	Tyr	Gly	Ser	
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ttc	aaa	gag	gca	aaa	ata	gag	gaa	cat	ctg	gcc	agg	gtg	gaa	gcg	gta	713
Phe	Lys	Glu	Ala	Lys	Ile	Glu	Glu	His	Leu	Ala	Arg	Val	Glu	Ala	Val	
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aca	aag	gag	ata	gaa	aca	aca	gga	acc	tac	caa	ctg	acg	gga	gat	gag	761
Thr	Lys	Glu	Ile	Glu	Thr	Thr	Gly	Thr	Tyr	Gln	Leu	Thr	Gly	Asp	Glu	
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ctc	atc	ttc	gcc	acc	aag	cag	gcc	tgg	cgc	aat	gcc	cca	cgc	tgc	att	809
Leu	Ile	Phe	Ala	Thr	Lys	Gln	Ala	Trp	Arg	Asn	Ala	Pro	Arg	Cys	Ile	
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ggg	agg	atc	cag	tgg	tcc	aac	ctg	cag	gtc	ttc	gat	gcc	cgc	agc	tgt	857
Gly	Arg	Ile	Gln	Trp	Ser	Asn	Leu	Gln	Val	Phe	Asp	Ala	Arg	Ser	Cys	
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tcc	act	gcc	cgg	gaa	atg	ttt	gaa	cac	atc	tgc	aga	cac	gtg	cgt	tac	905
Ser	Thr	Ala	Arg	Glu	Met	Phe	Glu	His	Ile	Cys	Arg	His	Val	Arg	Tyr	
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tcc	acc	aac	aat	ggc	aac	atc	agg	tgc	gcc	atc	acc	gtg	ttc	ccc	cag	953
Ser	Thr	Asn	Asn	Gly	Asn	Ile	Arg	Ser	Ala	Ile	Thr	Val	Phe	Pro	Gln	
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cgg	agt	gat	ggc	aag	cac	gac	ttc	cgg	gtg	tgg	aat	gct	cag	ctc	atc	1001
Arg	Ser	Asp	Gly	Lys	His	Asp	Phe	Arg	Val	Trp	Asn	Ala	Gln	Leu	Ile	
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Arg	Tyr	Ala	Gly	Tyr	Gln	Met	Pro	Asp	Gly	Ser	Ile	Arg	Gly	Asp	Pro	
				270					275					280		
gcc	aac	gtg	gaa	ttc	act	cag	ctg	tgc	atc	gac	ctg	ggc	tgg	aag	ccc	1097
Ala	Asn	Val	Glu	Phe	Thr	Gln	Leu	Cys	Ile	Asp	Leu	Gly	Trp	Lys	Pro	
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aag	tac	ggc	cgc	ttc	gat	gtg	gtc	ccc	ctg	gtc	ctg	cag	gcc	aat	ggc	1145
Lys	Tyr	Gly	Arg	Phe	Asp	Val	Val	Pro	Leu	Val	Leu	Gln	Ala	Asn	Gly	
		300					305					310				
cgt	gac	cct	gag	ctc	ttc	gaa	atc	cca	cct	gac	ctt	gtg	ctt	gag	gtg	1193
Arg	Asp	Pro	Glu	Leu	Phe	Glu	Ile	Pro	Pro	Asp	Leu	Val	Leu	Glu	Val	
		315				320					325					
gcc	atg	gaa	cat	ccc	aaa	tac	gag	tgg	ttt	cgg	gaa	ctg	gag	cta	aag	1241
Ala	Met	Glu	His	Pro	Lys	Tyr	Glu	Trp	Phe	Arg	Glu	Leu	Glu	Leu	Lys	
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tgg	tac	gcc	ctg	cct	gca	gtg	gcc	aac	atg	ctg	ctt	gag	gtg	ggc	ggc	1289
Trp	Tyr	Ala	Leu	Pro	Ala	Val	Ala	Asn	Met	Leu	Leu	Glu	Val	Gly	Gly	
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ctg	gag	ttc	cca	ggg	tgc	ccc	ttc	aat	ggc	tgg	tac	atg	ggc	aca	gag	1337

Leu	Glu	Phe	Pro	Gly	Cys	Pro	Phe	Asn	Gly	Trp	Tyr	Met	Gly	Thr	Glu		
			365					370					375				
atc	gga	gtc	cgg	gac	ttc	tgt	gac	gtc	cag	cgc	tac	aac	atc	ctg	gag	1385	
Ile	Gly	Val	Arg	Asp	Phe	Cys	Asp	Val	Gln	Arg	Tyr	Asn	Ile	Leu	Glu		
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gaa	gtg	ggc	agg	aga	atg	ggc	ctg	gaa	acg	cac	aag	ctg	gcc	tcg	ctc	1433	
Glu	Val	Gly	Arg	Arg	Met	Gly	Leu	Glu	Thr	His	Lys	Leu	Ala	Ser	Leu		
		395					400				405						
tgg	aaa	gac	cag	gct	gtc	gtt	gag	atc	aac	att	gct	gtg	atc	cat	agt	1481	
Trp	Lys	Asp	Gln	Ala	Val	Val	Glu	Ile	Asn	Ile	Ala	Val	Ile	His	Ser		
410					415					420					425		
ttt	cag	aag	cag	aat	gtg	acc	atc	atg	gac	cac	cac	tcg	gct	gca	gaa	1529	
Phe	Gln	Lys	Gln	Asn	Val	Thr	Ile	Met	Asp	His	His	Ser	Ala	Ala	Glu		
				430					435					440			
tcc	ttc	atg	aag	tac	atg	cag	aat	gaa	tac	cgg	tcc	cgt	ggg	ggc	tgc	1577	
Ser	Phe	Met	Lys	Tyr	Met	Gln	Asn	Glu	Tyr	Arg	Ser	Arg	Gly	Gly	Cys		
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ccg	gca	gac	tgg	att	tgg	ctg	gtc	cct	ccc	atg	tct	ggg	agc	atc	acc	1625	
Pro	Ala	Asp	Trp	Ile	Trp	Leu	Val	Pro	Pro	Met	Ser	Gly	Ser	Ile	Thr		
		460					465					470					
ccc	gtg	ttt	cac	cag	gag	atg	ctg	aac	tac	gtc	ctg	tcc	cct	ttc	tac	1673	
Pro	Val	Phe	His	Gln	Glu	Met	Leu	Asn	Tyr	Val	Leu	Ser	Pro	Phe	Tyr		
	475					480					485						
tac	tat	cag	gta	gag	gcc	tgg	aaa	acc	cat	gtc	tgg	cag	gac	gag	aag	1721	
Tyr	Tyr	Gln	Val	Glu	Ala	Trp	Lys	Thr	His	Val	Trp	Gln	Asp	Glu	Lys		
490					495					500					505		
cgg	aga	ccc	aag	aga	aga	gag	att	cca	ttg	aaa	gtc	ttg	gtc	aaa	gct	1769	
Arg	Arg	Pro	Lys	Arg	Arg	Glu	Ile	Pro	Leu	Lys	Val	Leu	Val	Lys	Ala		
				510					515					520			
gtg	ctc	ttt	gcc	tgt	atg	ctg	atg	cgc	aag	aca	atg	gcg	tcc	cga	gtc	1817	
Val	Leu	Phe	Ala	Cys	Met	Leu	Met	Arg	Lys	Thr	Met	Ala	Ser	Arg	Val		
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aga	gtc	acc	atc	ctc	ttt	gcg	aca	gag	aca	gga	aaa	tca	gag	gcg	ctg	1865	
Arg	Val	Thr	Ile	Leu	Phe	Ala	Thr	Glu	Thr	Gly	Lys	Ser	Glu	Ala	Leu		
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gcc	tgg	gac	ctg	ggg	gcc	tta	ttc	agc	tgt	gcc	ttc	aac	ccc	aag	gtt	1913	
Ala	Trp	Asp	Leu	Gly	Ala	Leu	Phe	Ser	Cys	Ala	Phe	Asn	Pro	Lys	Val		
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gtc	tgc	atg	gat	aag	tac	agg	ctg	agc	tgc	ctg	gag	gag	gaa	cgg	ctg	1961	
Val	Cys	Met	Asp	Lys	Tyr	Arg	Leu	Ser	Cys	Leu	Glu	Glu	Glu	Arg	Leu		
570					575					580					585		
ctg	ttg	gtg	gtg	acc	agt	acg	ttt	ggc	aat	gga	gac	tgc	cct	ggc	aat	2009	
Leu	Leu	Val	Val	Thr	Ser	Thr	Phe	Gly	Asn	Gly	Asp	Cys	Pro	Gly	Asn		
				590					595					600			

gga gag aaa ctg aag aaa tcg ctc ttc atg ctg aaa gag ctc aac aac	2057
Gly Glu Lys Leu Lys Lys Ser Leu Phe Met Leu Lys Glu Leu Asn Asn	
605 610 615	
aaa ttc agg tac gct gtg ttt ggc ctc ggc tcc agc atg tac cct cgg	2105
Lys Phe Arg Tyr Ala Val Phe Gly Leu Gly Ser Ser Met Tyr Pro Arg	
620 625 630	
ttc tgc gcc ttt gct cat gac att gat cag aag ctg tcc cac ctg ggg	2153
Phe Cys Ala Phe Ala His Asp Ile Asp Gln Lys Leu Ser His Leu Gly	
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Glu Asp Ala Phe Arg Ser Trp Ala Val Gln Thr Phe Lys Ala Ala Cys	
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Glu Thr Phe Asp Val Arg Gly Lys Gln His Ile Gln Ile Pro Lys Leu	
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Lys Asn Val Phe Thr Met Arg Leu Lys Ser Arg Gln Asn Leu Gln Ser	
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Pro Thr Ser Ser Arg Ala Thr Ile Leu Val Glu Leu Ser Cys Glu Asp	
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Gln Ala Leu Thr Tyr Ser Pro Asp Ile Thr Thr Pro Pro Thr Gln Leu	
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agg ctg gag gcc ctg tgc cag ccc tca gag tac agc aag tgg aag ttc Arg Leu Glu Ala Leu Cys Gln Pro Ser Glu Tyr Ser Lys Trp Lys Phe 860 865 870	2825
acc aac agc ccc aca ttc ctg gag gtg cta gag gag ttc ccg tcc ctg Thr Asn Ser Pro Thr Phe Leu Glu Val Leu Glu Phe Pro Ser Leu 875 880 885	2873
cgg gtg tct gct ggc ttc ctg ctg tcc cag ctc ccc att ctg aag ccc Arg Val Ser Ala Gly Phe Leu Leu Ser Gln Leu Pro Ile Leu Lys Pro 890 895 900 905	2921
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Cys Gly Asp Val Arg Met Ala Arg Asp Val Ala His Thr Leu Lys Gln	
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Ser Ser Leu Glu Met Ser Ala Leu	
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54

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102

Trp	Val	Trp	Val	Ser	Leu	Leu	Val	Ala	Ala	Gly	Thr	Val	Gln	Pro	Ser		
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Asp	Ser	Gln	Ser	Val	Cys	Ala	Gly	Thr	Glu	Asn	Lys	Leu	Ser	Ser	Leu		
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tct	gac	ctg	gaa	cag	cag	tac	cga	gcc	ttg	cgc	aag	tac	tat	gaa	aac	198	
Ser	Asp	Leu	Glu	Gln	Gln	Tyr	Arg	Ala	Leu	Arg	Lys	Tyr	Tyr	Glu	Asn		
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tgt	gag	gtt	gtc	atg	ggc	aac	ctg	gag	ata	acc	agc	att	gag	cac	aac	246	
Cys	Glu	Val	Val	Met	Gly	Asn	Leu	Glu	Ile	Thr	Ser	Ile	Glu	His	Asn		
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Arg	Asp	Leu	Ser	Phe	Leu	Arg	Ser	Val	Arg	Glu	Val	Thr	Gly	Tyr	Val		
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tta	gtg	gct	ctt	aat	cag	ttt	cgt	tac	ctg	cct	ctg	gag	aat	tta	cgc	342	
Leu	Val	Ala	Leu	Asn	Gln	Phe	Arg	Tyr	Leu	Pro	Leu	Glu	Asn	Leu	Arg		
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Ile	Ile	Arg	Gly	Thr	Lys	Leu	Tyr	Glu	Asp	Arg	Tyr	Ala	Leu	Ala	Ile		
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Phe	Leu	Asn	Tyr	Arg	Lys	Asp	Gly	Asn	Phe	Gly	Leu	Gln	Glu	Leu	Gly		
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Leu	Lys	Asn	Leu	Thr	Glu	Ile	Leu	Asn	Gly	Gly	Val	Tyr	Val	Asp	Gln		
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Asn	Lys	Phe	Leu	Cys	Tyr	Ala	Asp	Thr	Ile	His	Trp	Gln	Asp	Ile	Val		
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cgg	aac	cca	tgg	cct	tcc	aac	ttg	act	ctt	gtg	tca	aca	aat	ggt	agt	582	
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Ser	Gly	Cys	Gly	Arg	Cys	His	Lys	Ser	Cys	Thr	Gly	Arg	Cys	Trp	Gly		
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ccc	aca	gaa	aat	cat	tgc	cag	act	ttg	aca	agg	acg	gtg	tgt	gca	gaa	678	
Pro	Thr	Glu	Asn	His	Cys	Gln	Thr	Leu	Thr	Arg	Thr	Val	Cys	Ala	Glu		
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Gln	Cys	Asp	Gly	Arg	Cys	Tyr	Gly	Pro	Tyr	Val	Ser	Asp	Cys	Cys	His		
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cga	gaa	tgt	gct	gga	ggc	tgc	tca	gga	cct	aag	gac	aca	gac	tgc	ttt	774	
Arg	Glu	Cys	Ala	Gly	Gly	Cys	Ser	Gly	Pro	Lys	Asp	Thr	Asp	Cys	Phe		
			235					240					245				

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aat gca aag tac aca tat gga gca ttc tgt gtc aag aaa tgt cca cat Asn Ala Lys Tyr Thr Tyr Gly Ala Phe Cys Val Lys Lys Cys Pro His 280 285 290 295	918
aac ttt gtg gta gat tcc agt tct tgt gtg cgt gcc tgc cct agt tcc Asn Phe Val Val Asp Ser Ser Ser Cys Val Arg Ala Cys Pro Ser Ser 300 305 310	966
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cca cca aac atg act gac ttc agt gtt ttt tct aac ctg gtg acc att Pro Pro Asn Met Thr Asp Phe Ser Val Phe Ser Asn Leu Val Thr Ile 410 415 420	1302
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Val Lys Ile Pro Val Ala Ile Lys Ile Leu Asn Glu Thr Thr Gly Pro	
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Lys Ala Asn Val Glu Phe Met Asp Glu Ala Leu Ile Met Ala Ser Met	
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Ile Gln Leu Val Thr Gln Leu Met Pro His Gly Cys Leu Leu Glu Tyr	
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Val His Glu His Lys Asp Asn Ile Gly Ser Gln Leu Leu Leu Asn Trp	
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Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Lys Ser Pro Asn	
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His Val Lys Ile Thr Asp Phe Gly Leu Ala Arg Leu Leu Glu Gly Asp	
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